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ABSTRACT

To teach language processing is to teach students how to clarify information in material they are reading or discussing so that they are able to understand, evaluate, learn, store, recall, and use it. The first section of this guide, which is based on the use of the Formula Phonics method, discusses the teaching of language processing in terms of the group, the physical environment of the learning station, dynamics of group instruction, and material to be read. The second section presents the Reading Formula for decoding unknown words, the Spelling Formula for analyzing the way words are spelled, and the Learning Formula for clarifying words or concepts that students do not understand. Sample lessons are provided to illustrate how to help students use these formulas in processing language. (GW)

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Teaching Language Processing in a Group Setting Using The Formula Phonics Reading, Spelling, and Learning Formulas

by Colleen and Edward Vail

AN INSTRUCTIONAL GUIDE

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CS004 026

Teaching Language Processing in a Group Setting Using The Formula Phonics Reading, Spelling, and Learning Formulas

COURSE OUTLINE

I. WE THINK OF LANGUAGE PROCESSING IN TERMS OF THE GROUP, THE PHYSICAL ENVIRONMENT OF THE LEARNING STATION, DYNAMICS OF GROUP INSTRUCTION AND MATERIAL TO BE READ.

A. THE GROUP
B. PHYSICAL ENVIRONMENT OF LEARNING STATION
C. DYNAMICS OF GROUP INSTRUCTION
D. CHOOSING READING MATERIAL FOR USE IN LANGUAGE PROCESSING
E. LANGUAGE PROCESSING

II. WE CLARIFY THE UNKNOWN BY USING THE READING, SPELLING, AND LEARNING FORMULAS.

A. THE READING FORMULA
B. USING THE READING FORMULA
C. THE SPELLING FORMULA
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E. THE LEARNING FORMULA
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Teaching Language Processing in a Group Setting Using The Formula Phonics Reading, Spelling, and Learning Formulas

by Colleen and Edward Vail

TO TEACH LANGAUGE PROCESSING IS TO TEACH STUDENTS HOW TO CLARIFY THE INFORMATION IN THE MATERIAL THEY ARE READING OR DISCUSSING SO THAT THEY ARE ABLE TO UNDERSTAND IT, EVALUATE IT, LEARN IT, STORE IT, RECALL IT, AND USE IT. LANGUAGE PROCESSING NEVER INTERRUPTS READING BECAUSE LANGUAGE PROCESSING *IS* READING.

I. WE THINK OF LANGUAGE PROCESSING IN TERMS OF THE GROUP, THE PHYSICAL ENVIRONMENT OF THE LEARNING STATION, DYNAMICS OF GROUP INSTRUCTION AND MATERIAL TO BE READ.

A. THE GROUP

When teaching processing of the printed word it is desirable to group students homogeneously in terms of general language development so that they may be taught rather than managed. An essential element of such grouping is a plan whereby upward mobility for all students is guaranteed. Grouped in this way, the individual students learn as a product of the group experience and at an accelerated rate since the *group intellect* permits the reading and processing of material whose content and level of difficulty far exceeds that which most members of the group could read and comprehend individually. Homogeneous grouping permits the selection of written materials which are at the proper instructional level for every student. It also permits the teacher to select language processing experiences which complement the identified needs of the group, *i.e.* decoding, spelling, vocabulary building, discussion, reference work, etc.

1. Major considerations when grouping students are:
   a. General reading level and habits
   b. General level of language development in terms of:
      1. Spelling
      2. Writing
      3. Speaking
      4. Listening
   c. General level of intellectual, social, and emotional development

2. Minor considerations when grouping students are:
   a. Age
   b. Size
   c. Grade level

B. THE PHYSICAL ENVIRONMENT OF THE LEARNING STATION

1. Is there only one group in the teaching station at a time? If a second group of students is present, is it possible to isolate them from the Dialog Group?
2. Is the group seated in a discussion semi-circle so that each participant can see the other faces?
3. Are the poster-wall charts in plain sight of each student?
4. Are the resources necessary for effective language processing available? *i.e.* dictionaries, thesaurus, encyclopedia, maps, supplemental writings.

C. THE DYNAMICS OF GROUP INSTRUCTION

1. Plan to start each lesson with group activities that require the recall of material which was read, processed, and learned during earlier sessions.
2. Remember that the student whom you choose to read aloud is not having *his* reading lesson for the day. He is only serving as a model and it is the *group* which is having the reading lesson.
3. The teacher's main function is to serve as the primary model for the group.
4. Work to keep the entire group on task at all times rather than concentrate on an individual student.
5. Never let group members anticipate when they will be called upon either to answer your question or to treat with another student's response.
6. Use of the terms *explain, connect,* and *defend* in your questions or directions to the group will assure that answers are detailed rather than just "yes" or "no."
7. Every student response must be acknowledged by the teacher and, if possible, commented on, evaluated, or expanded upon by others in the group.
8. Don't ask difficult or complex questions until you have laid a foundation with simple questions.
9. Ask direct questions and provide both positive and negative feedback.
10. Give the group ample time to think about your questions *before* any student is required to respond.
11. Never put a student in a losing position. Get what you can and let someone else build on that foundation.
12. Plan to conclude each lesson with group activities that provide a review of material which was read, processed, and learned during that session.

D. CHOOSING READING MATERIAL FOR USE IN LANGUAGE PROCESSING

1. Select materials written at each group's *instructional level* so that the material provides a continual challenge in terms of:
   a. **Vocabulary.** Are the words used difficult enough to provide decoding *(Reading Formula)* and encoding *(Spelling Formula)* activities in groups where those activities are indicated? Is the vocabulary challenging enough to stimulate or require clarification activities *(Learning Formula)* with even the highest achieving groups?
   b. **Information and Knowledge.** Does the author assume the reader possesses an appropriate body of pre-existing information and knowledge? Does the author also provide a significant flow of new information and knowledge?
   c. **Style.** Does the material provide the students with a good model for literary form and a good model for style in writing?
   d. **Ideas.** Does the material lend itself to questioning at a single level only, or does it lend itself to questioning at many levels? *i.e.* Bloom's taxonomy.

2. Choose material which teaches rather than reinforces.

3. Choose material which can be completed in a short enough time so students can consider the entire work.

E. LANGUAGE PROCESSING

By *language processing* is meant how we teach students to *clarify* the information in the material they are reading and discussing so that they are able to understand it, learn it, evaluate it, store it, recall it, and use it. When reading matter is chosen which is at the group's instructional level, it assures that there will be many opportunities to help students learn how to clarify its contents. It is always possible to choose material at any group's instructional level because the Formula Phonics Reading-Spelling-Language Processing System (in contrast to most other reading systems which are linear in terms of teaching both skills and information) gives students *random access* to the printed word.

II. WE CLARIFY THE UNKNOWN BY USING THE READING, SPELLING, AND LEARNING FORMULAS.

A. THE READING FORMULA

The Reading Formula is used to decode words which a student does not know at sight. Students are taught the essential Formula Phonics information *before* they begin to use this decoding tool.

THE READING FORMULA

1. **TAKE OFF THE SUFFIX**
2. **UNDERLINE THE PALS**
3. **MARK THE LETTERS WHICH STEAL SOUNDS – (THIEVES) C, G, OR Y**
4. **MARK OUT SILENT LETTERS**
5. **MARK THE REMAINING VOWELS, ALWAYS ASSUME A VOWEL IS SHORT UNLESS YOU CAN PROVE OTHERWISE**
6. **CYCLE AND THEN SOUND OUT THE WORD**
7. **DECIDE IF THE WORD MAKES SENSE IN THE SENTENCE**

B. USING THE READING FORMULA

In this instance it is assumed that the student who is reading aloud does not know the last word in the following sentence: "Both pilots were pushed back into their seats as the spacecraft began *accelerating.*"

After the teacher determines that the *reader* cannot figure out the word by guessing, by using contextual clues, or by its configuration, the word is written on the board and the *group* uses the Reading Formula to permit its decoding.

A C C E L E R A T I N G

TCH: Does this word have a suffix? (pause) Mary?

MARY: Yes it does, the I N G.

TCH: O.K. I'll take it off.

A C C E L E R A T I N G

TCH: Now that we've removed the suffix, how do you think the base word ended? (pause) Jim?

JIM: In a silent E.

TCH: I need someone to explain why Jim gave us that answer. (pause) Lisa?

LISA: Because when you take off the I N G suffix, there's only one T. The A is not protected.

TCH: Fine! So what do we know about that last letter A? (pause) Sue?

SUE: The silent E would make it say its own name.

A C C E L E R Ā T (E I N G)

TCH: Now what does the Formula tell us to do? (pause) Bob?

BOB: Find the pals. There are two of them, the E L and the E R.

TCH: Good. I'll mark it up.

A C C E L E R Ā T (E I N G)

TCH: O.K. What about thieves? (pause) Bill?

BILL: Yes. The two C's.

TCH: How should I mark the C's? (pause) Jose, I'd like you to tell me how to mark the two C's and tell me why, please.

JOSE: Change the first one to a K because it isn't followed by E, I, or Y, and change the second one to an S because it has an E after it.

A K S E L E R Ā T (E I N G)

TCH: Any silent letters? (pause) Mary?

MARY: No.

TCH: Now I need someone to finish it up. Ann, you do it.

ANN: Put a rocker over the first A because we always assume a vowel is short.

Ă K S E L E R Ā T (E I N G)

TCH: Very good! Now that our word is all marked up, let's get back to our reader. Mike, first I want you to cycle it back in the sentence so your brain will know which word to close on.

MIKE: Let's see, "Both pilots were pushed back into their seats as the space craft began . . .

. . . began Ă

Ă K

Ă K S

. . . the space craft began Ă K S E L

Ă K S E L E R

. . . began Ă K S E L E R Ā, oh, of course,

. . . began ACCELERATING. The word's *accelerating*.

TCH: *Accelerating.* Did you say it or did you read it?

MIKE: I read it. I know what it means – to go faster. And it makes sense when I put it back into the sentence . . . "The space craft began accelerating!"

TCH: Does anyone disagree? O.K. We know the word and we know what it means. Suppose you wanted to learn how to spell the word *accelerating,* how would we go about it?

C. THE SPELLING FORMULA

The Spelling Formula is used to analyze the way words are spelled so that the student may determine which letters, if any, must be memorized in order to spell the word correctly in the future. The same essential Formula Phonics information which students learn in order to use the Reading Formula (decoding) is used with the Spelling Formula (encoding).

THE SPELLING FORMULA

1. **LOOK CAREFULLY AT THE WORD – IF IT IS A DERIVED WORD, DETERMINE THE BASE WORD**
2. **PRONOUNCE THE WORD WITH ITS STANDARD PRONUNCIATION**
3. **COUNT THE LETTERS AND PALS**
4. **SOUND IT OUT SLOWLY, MATCHING SOUNDS WITH LETTERS AND PALS**
5. **REMEMBER ONLY PROBLEM OR SILENT LETTERS**
6. **LEARN TO SPELL ALL THE WORD'S FORMS**

D. USING THE SPELLING FORMULA

In this instance the teacher decides to prolong the processing of *accelerating* by having the group consider how it must be spelled.

TCH: So that we'll remember how to spell our word correctly, let's look at *accelerating* in terms of the Spelling Formula.

Accelerating is a derived word. I want to know the base word. (pause) Ed, what's the base word?

ED: It's *accelerate.*

TCH: That's correct. Look at *accelerating* here on the board and decide how we'll change it so that it spells *accelerate.* (pause) Sam?

SAM: Just erase the ING and write in a silent E.

TCH: Absolutely correct, Sam. Thank you. The second step in our Spelling Formula tells us to pronounce the word with its standard English pronunciation. On occasion I've heard people carelessly leave out the K sound made by the first C and heard them say "uh" instead of "er" in the middle of the word. When we say *accelerate,* let's make certain we don't speak carelessly. Let's say it together, *accelerate.*

ALL: *Accelerate.*

TCH: That sounded fine. For our third step, let's count the letters and the pals. Jill, how many do you count?

JILL: It has six letters and two pals, eight altogether.

TCH: Does everyone agree? Good. Now, let's sound it out slowly while we count the sounds.

ALL: A – K – S – EL – ER – A – T

TCH: How many sounds does it have, Fred?

FRED: Seven.

TCH: That's right, eight letters and pals and seven sounds. So, what has to be remembered? (pause) Eva?

EVA: *Accelerate* ends in an E which you can't hear. You have to remember that E when you want to spell it.

TCH: Very good, Eva. There's something else we should remember about that silent E. (pause) Do you know what it is, Jose?

JOSE: You have to take it off if you want to add a suffix which starts with a vowel.

TCH: Excellent! Now, is there anything else to remember in *accelerate?* (pause) Mike?

MIKE: Yes. You have to remember that it is a C making the S sound. So, we remember that *accelerate* has a C in it and like Eva said, we remember that it ends in silent E.

TCH: That's right, a C and an E to remember. I'd like someone to explain why Mike didn't say we had to remember both of the C's. (pause) Sue?

SUE: It's because the first C makes a K sound and we know that when we're spelling and hear a K sound we always assume that a C is making it. So we don't have to remind ourselves to remember the first C.

TCH: Very good. So instead of having to remember ten letters when we spell *accelerate* we have only to remember two – it has a C in it and ends in silent E.

Let's make sure we can spell its' derived forms, too. Remember, Jose told us that we'd remove the final E before adding a suffix which begins with a vowel. Will you tell us a derived form and write it on the board for us, Jose?

JOSE: *Accelerated.* A – C – C – E – L – E – R – A – T – E – D

TCH: Who knows another one? Eva?

EVA: *Accelerator.* Like the *accelerator* on the car.

A – C – C – E – L – E – R – A – T – O – R

TCH: Fine! And we want to make sure we can spell *acceleration,* too. Sam?

SAM: A – C – C – E – L – E – R – A – T – I – O – N

TCH: Very good, Sam. Now, I'd like you all to think about something before we meet again tomorrow. Perhaps an unabridged dictionary will be a good source of information to help solve the problem I'm going to give you. It is: What word, that has the same root as *accelerate,* means the *opposite* of *accelerate?*

E. THE LEARNING FORMULA

The Learning Formula is used to teach students how to clarify that which they don't understand in what they are reading or discussing.

THE LEARNING FORMULA

1. **WHAT DO I NEED TO KNOW?**
2. **WHAT DO I ALREADY KNOW?**
3. **WHAT MUST I DO?**

   DO IT!
4. **WHAT HAVE I LEARNED?**
5. **WHAT SHOULD I DO WITH MY INFORMATION?**

F. USING THE LEARNING FORMULA – TEACHING VOCABULARY

In this instance the teacher has determined that the group is probably unaware of the meaning of the word *savanna* which they encountered as they read: AS THE GROUP CAME AT LAST TO THE SAVANNA, THE GUIDE CAUGHT A FIRST GLIMPSE OF THE OLD LION.

TCH: There's a word in that sentence which could cause some confusion. What do you think it might be? (pause) Sue?

SUE: I think it's *savanna*. I don't know what it means.

TCH: How about the rest of you? Is anyone sure he knows what *savanna* means? (pause) No one? O.K. I want someone to tell me exactly what it is we need to know. (pause) Paul, you tell us please.

PAUL: We need to know what *savanna* means in the sentence Joe was just reading.

TCH: Good. Even though we don't know what *savanna* means, we do know some things about it. What kind of clues do we have? (pause) Mike?

MIKE: Well, the *savanna* is in Africa. And it's where they found the old lion.

TCH: Fine, Mike. Can anyone add anything to what Mike has told us? (pause) Mary?

MARY: I think it's some place in the jungle. That's where they are.

TCH: Anyone else? No? O.K. What's the quickest way to find out what a *savanna* is? What should you do? (pause) Fred?

FRED: Look it up in the dictionary.

TCH: That makes sense. O.K. We'll open our dictionaries, but before we do, let's take an educated guess about what we'll learn in the dictionary. (pause) Mary, what do you think you are going to learn?

MARY: I think it will say a *savanna* is a place that's all overgrown with bushes – like a thicket.

TCH: Bill?

BILL: Like Mary said, like a bramble patch.

TCH: Anyone else? No? O.K. Go ahead. Look it up in your dictionary. Do it!

FRED: I have it. It's on page 328 in the left column.

TCH: Fast work, Fred. Now, everyone open to page 328 and locate *savanna.* Read the definition silently. (pause) Now then, what have you learned? Sam?

SAM: I learned that none of us knew what a *savanna* is. It's just the opposite of what we said. It's an open place with lots of grass and only a few trees. I guess that's why the guide was able to see the old lion at last, cause he was in an open place.

TCH: Good thinking, Sam. That's a logical connection to make. Anything else? Bill?

BILL: You can spell it with a silent H at the end.

TCH: Have you learned anything else from the dictionary? (pause) Sue?

SUE: We have *savannas* in the United States in states like Florida.

TCH: Good. Now suppose we wanted to find out more about *savannas,* what should we do? (pause) Jose, where else would you look?

JOSE: I'd look in an encyclopedia. It would tell about it there, I bet.

TCH: I bet it would, too. Mary, your hand is up, where would you go to find out more about *savannas?*

MARY: I'd look in the atlas.

TCH: I know that the *savanna* will be the setting for the rest of this story so let's take a few minutes to look up *savanna* in both our encyclopedia and our atlas and find out what kind of information they contain. Jose, you use the encyclopedia and we'll let Mary use the atlas. Go ahead. O.K. Let's all gather around Jose and find out what the encyclopedia says. (this is done) Now, let's see what Mary has found in the Atlas. (this is done) What else have you learned? Beverly?

BEV: Well, I guess the encyclopedia gives you a pretty good description of a *savanna,* but until I saw the map in the atlas, I never knew how much of the world is covered with *savannas!*

FRED: That's right. I thought a *savanna* was just a clearing in the jungle.

TCH: Now that your concept of *savanna* is clarified, what are you going to do with what you've learned. What should you always first do with your information? (pause) Susan?

SUE: Use it to understand the story. Like Sam said, now we know why the guide could see the old lion again. He was in the open.

TCH: Good. Now what do you think? Is the word worth remembering? (pause) Mary, your hand is up.

MARY: I know I'm going to learn that word. I felt like a dope when I didn't know it. Then I'm going to start using it and I'll remember it has an N in it so I can spell it.

TCH: Those are good plans, Mary. Now once more, what's a *savanna?* Jose?

JOSE: It's an open place in jungle country with grass and a few trees.

TCH: Thank you Jose. Oh, by the way, I'm sure all of you know that when you write for me on Friday, *savanna* is going to be on your vocabulary list. All right, so now the guide has sighted the old lion in an open area. Let's see what happens. Walt, we need another reader. Will you start the reading please?

(NOTE: It is always a teacher judgment as to whether a major lesson using the Learning, Reading, or Spelling Formulas should be taught. Above, the teacher used the group's need to understand the meaning of the word *savanna* as a means for teaching the kind of information they could expect to learn from three of the reference works available in the learning station – dictionary, encyclopedia, and atlas.)

G. USING THE LEARNING FORMULA – TEACHING COMPREHENSION

When students are reading material written at their instructional level, there will of necessity arise a need to process what is being read – by way of dialog and, when appropriate, by use of the Learning Formula. In many cases careful reading (and possibly rereading) of the author's words, followed by questioning and discussion involving all of the group will provide the answer. Sometimes having the group work through only the first two steps in the Learning Formula will result in arriving at the answer. In such cases, the third step WHAT MUST I DO? DO IT! is skipped and the group moves directly to steps four and five.

However, when in the opinion of the instructor or members of the group there is material which demands to be clarified and learned, the Learning Formula is the tool to use. Following are some of the elements the instructor might consider when teaching students how to apply the Learning Formula.

1. **What Do I Need to Know?** *What do my students need to know?* The purpose of this first step is to teach students to identify exactly what it is they need to know. This need to know may exist, for instance, because they are not able to follow the story line; because the author assumes they possess information, knowledge, attitudes, or skills which in fact they do not; because they don't understand or can't identify with a character's motives; because they don't understand the theme or how that theme was developed; because they don't understand the author's point of view; or because they are asked to do, feel, appreciate or understand something which at present is outside their world of understanding.

2. **What Do I Already Know?** *How much information about this subject do my students already possess?* The purpose of this second step is to teach students to take a hard look at what the author has written and also to examine their memories to discover if there is any information they already know which might help in the process of clarification. What clues can be found in the writing which will help in understanding and solving the problem at hand? What learning in the total life experience of the members of the group may be focused on understanding and solving the problem?

3A. **What Must I Do?** *Which procedures should my students first examine and then employ in solving the problem?*

The purpose of this third step is to teach students to select one or more appropriate processes for solving the problem. If the problem has an answer (*i.e.* What is the tallest mountain in South America? or How does a turbine work?) we say that the teaching process is *maieutic.* If the problem has no answer in fact (*i.e.* Suppose the Central Powers had won World War I? or Is stealing always morally wrong?) so that only a concensus can be reached, we say that the teaching process is *Socratic.*

Some of the problem solving processes which the group might consider include the use of reference materials such as dictionaries, maps, encyclopedias, almanacs, or atlases; examining the historical context of the author and times; seeking and examining the opinions of authorities; discussion by and concensus of the group; and actually working through the clarification process at desks, at the board, in a lab, or in the field. As a part of this step students should be taught always to ask *What do i think my answer is going to be?*

3B. **Do It!**

Here the group is set to using one or more of the procedures or tools they have selected until an answer is found, a concensus is reached, or else it is determined that they cannot solve the problem using the procedures or tools they have selected.

4. **What Have I Learned?** *What is the sum total of information my students have discovered?*

The purpose of this fourth step is to teach students to examine *both* their answer and the procedures they used in arriving at that answer. They might be asked to consider, for instance, if their problem has an answer they can find; if their answer is the one they expected to find; if they have learned a reliable way to solve this type of problem; if one way is better than another in solving this kind of problem; if they understand the answer they have discovered; and if they can accept their answer because it is reasonable.

5. **What Should I Do With My Information?** *What use will my students be able to make of that which they have discovered?*
   The purpose of this fifth step is to teach students to use their information in as many ways as possible. The first step, of course, is to teach them always to use what they have discovered to clarify the material they are reading. Following this they should consider what they have just learned in terms of any other uses it may have. If it is decided that the information has other uses, then they should be taught how to index what has been learned, how to file it in their minds, and how to retrieve it when needed.

H. REINFORCING LEARNING

The instructor should never assume that because a group has participated in a language processing episode involving decoding, spelling, vocabulary building, or information clarification that the material processed has been indeed *learned* by the students in the group. LEARNING DEMANDS PRACTICE! Therefore, when in the teacher's judgment the information discovered is particularly valuable, the learning period should be extended by assigning follow-up activities which provide an opportunity or a need to use that information, *i.e.* additional discussion, debate, writing activities, research, lab work, drawing, drama, or games.

The printed book . . . is not remorselessly bound to the forward direction of time, as any spoken discourse is. The reader can do what the viewer and the listener cannot, which is to pause and reflect, turn the pages back and the argument over, compare one fact with another and, in general, appreciate the detail of evidence without being distracted by it.

J. Bronowski
THE ASCENT OF MAN